

### **Abstract of the Disclosure**

Pervasive output capability is provided so that an information apparatus can pervasively output digital content to an output device regardless of the processing power, display screen size and memory space of the information apparatus. This allows small mobile devices with limited display, processing power, and memory to be able to output a digital document (e.g., PDF, HTML, PowerPoint etc) in its full original richness, without resorting to downsizing, truncating, reducing, clipping or otherwise altering the original document. A data output controller controls interaction between an information apparatus and a selected output device in connection with the selected output device rendering output content managed with the information apparatus. The data output controller may include means for storing at least part of an output device object having one or more attributes relating to the selected output device, and means for providing the at least part of the output device object to the information apparatus. The data output controller may further include means for receiving output data from the information apparatus, the output data relating to the output content managed with the information apparatus, and means for passing the output data to the selected output device for rendering of the output content.